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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/529,374  | 10/05/2005  | Patrick Meynier      | 612.44903X00        | 4781             |
| 20457   | 7590        | 06/29/2006           | EXAMINER            |                  |
| ANTONELLI, TERRY, STOUT & KRAUS, LLP<br>1300 NORTH SEVENTEENTH STREET<br>SUITE 1800<br>ARLINGTON, VA 22209-3873 |             |                      | HELLNER, MARK       |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 3663                |                  |

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                 |                |  |
|------------------------------|-----------------|----------------|--|
| <b>Office Action Summary</b> | Application No. | Applicant(s)   |  |
|                              | 10/529,374      | MEYNIER ET AL. |  |
|                              | Examiner        | Art Unit       |  |
|                              | Mark Hellner    | 3663           |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-27, 29, 31, 33-35 and 39-44 is/are rejected.
- 7) ☒ Claim(s) 28, 30, 32 and 36-38 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>03/28/2005</u> | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 23 to 44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 23, there is no antecedent basis for the terms "two end plates" recited by line 7.

Claims 24 to 39 are derived from claim 23.

In claim 40, there is no antecedent basis for the terms "the plates" recited by lines 4 and 5.

Claims 41 to 44 are derived from claim 40.

***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 23 to 25, 29, 31 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Paulsson.

Paulsson discloses a device intended to emit wave in an underground formation comprising: a vibrating element (figure 4); two driving slabs (66 and 83); a motive element (67 and 68) to generate vibration in the slabs; a generator (58 and 56) for providing periodic control signals to the motive element; the driving slabs being coupled to the solid material that makes up the wall of the well bore.

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The structure recited above reads on claim 23.

Claims 24 and 25 read on the shape of element (66) as shown by figure 5.

The wall of the well bore reads on claim 29.

Claims 31 and 39 read on the motive structure shown by figure 4.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 26, 27, 33 to 35 and 40 to 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paulsson.

The difference between claim 40 and Paulsson is sequentially controlling the various vibrators by means of a control with time lags between respective triggering times that depend on intervals between locations of the vibrators and a velocity of propagation of waves in formations surrounding the well, so as to obtain directive emission.

This difference read on the utilization of the Paulsson device for seismic surveying.

Motivation for using the Paulsson devices for seismic surveying is given by figures 8-10.

Claims 41 to 44 recite standard seismic surveying methodology.

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Claims 33 to 35 recite known seismic surveying methodology and structure that would have been inferred by a skilled artisan from figure 8-10.

Providing uneven relieve to the surfaces to the elements represented by number (66) would have been obvious because it was well known that a rough surface improve coupling.

Claims 28, 30, 32 and 36 to 38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication should be directed to Mark Hellner at telephone number 571 272 6981.

Mark Hellner

Primary Examiner

AU 3663

A handwritten signature in black ink, appearing to read "Mark Hellner", is written in a cursive style.